

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: October 29, 2008

Electronic Signature for Danielle Menzies: /Danielle Menzies/

Docket No.: 702_102
GE Docket No. 216754
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Clark A. Bendall et al.

Application No.: 10/768,761

Confirmation No.: 7060

Filed: January 29, 2004

Art Unit: 3739

For: Remote video inspection system having
control and display unit with interchangeable
insertion elements

Examiner: P. R. Smith

REPLY TO EXAMINER'S ANSWER

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INTRODUCTORY COMMENTS

In response to the Examiner's Answer dated September 4, 2008, Appellants respectfully submit this Reply to Examiner's Answer under 37 C.F.R. § 41.41.

TABLE OF CONTENTS

I.	STATUS OF CLAIMS	3
II.	GROUND OF REJECTION TO BE REVIEWED ON APPEAL	4
III.	ARGUMENT	5
A.	Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34: Murata '762 In View of Hill '600 and Further in View of Chikama '041	5
1.	Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34: The Combination of Murata '762, Hill '600 and Chikama '041 Fails To Teach Or Suggest A Unitary Control and Display Handset Element.....	5
2.	Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34: The Combination of Murata '762, Hill '600 and Chikama '041 Fails To Teach Or Suggest That a Plurality of Insertion Elements Can Be Connected to Said Unitary Control and Display Handset Element	14
B.	Claim 11: Murata '762 in View of Hill '600 and Chikama '041 and Further in View of Pearlman '992	16
C.	Claims 18, 22, 29, 31 and 32: Murata '762 In View of Hill '600 and Chikama '041 and Further in View of Saito '922	16
IV.	CONCLUSION.....	17

I. STATUS OF CLAIMS

Claims 10-14 and 17-34 are under final rejection.

Claims 1-9, 15, 16 and 35-40 stand withdrawn from consideration.

Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Publication No. 2001/0051762 to Murata ("Murata '762") in view of U.S. Patent No. 6,929,600 to Hill ("Hill '600") and in further view of U.S. Patent No. 5,002,041 to Chikama ("Chikama '041").¹

Claim 11 stands rejected under U.S.C. § 103(a) as being unpatentable over Murata '762 in view of Hill '600 and Chikama '041 and in further view of U.S. Patent No. 5,347,992 to Pearlman ("Pearlman '992").²

Claims 18, 22, 29, 31 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Murata '762 in view of Hill '600 and Chikama '041 and further in view of U.S. Patent No. 6,184,922 to Saito ("Saito '922").³

¹ Appellants note that in the November 14, 2007 Final Office Action the Examiner rejected Claim 27 "under 35 USC 103(a) as being unpatentable over Murata." (November 14, 2007 Final Office Action at p. 7, ¶ [24]), rather than the rejection presented in the Examiner's Answer based on the combination of Murata '762, Hill '600 and Chikama '041.

² Appellants note that despite the Examiner's statement in the Examiner's Answer that "Claim 11 stands rejected under U.S.C. § 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and Chikama (5,002,041) and in further view of Pearlman (5,347,992)," (Examiner's Answer at p. 4) the Examiner later states that "Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata in view of Pearlman (5,347,992)." (Examiner's Answer at p. 9, ¶ [14]) Regardless of whether Hill '600 and Chikama '041 are included in the rejection of Claim 11, Appellants believe the arguments submitted in Appellants' original Appeal Brief, as supplemented herein, traverse the rejection of Claim 11.

³ Appellants note that despite the Examiner's statement in the Examiner's Answer that "Claims 18, 22, 29, 31 and 32 stand rejected under U.S.C. § 103(a) as being unpatentable over Murata (2001/0051762) in view of Hill (6,929,600) and Chikama (5,002,041) and in further view of Saito (6,184,922)," (Examiner's Answer at p. 5) the Examiner later states that "Claims 18, 22, 29, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata in view of Saito (6,184,922)." (Examiner's Answer at p. 10, ¶ [15]) Regardless of whether Hill '600 and Chikama '041 are included in the rejection of Claims 18, 22, 29,

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection presented for consideration in this Appeal, as amended in response to the Examiner's Answer, are:

- A. Whether Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34 are properly rejected under 35 U.S.C. § 103(a) as being obvious over Murata '762 in view of Hill '600 and further in view of Chikama '041.
- B. Whether Claim 11 is properly rejected under U.S.C. § 103(a) as being unpatentable over Murata '762 in view of Hill '600 and Chikama '041 and further in view of Pearlman '992.
- C. Whether Claims 18, 22, 29, 31 and 32 are properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Murata '762 in view of Hill '600 and Chikama '041 and further in view of Saito '922.

31 and 32, Appellants believe the arguments submitted in Appellants' original Appeal Brief, as supplemented herein, traverse the rejection of Claims 18, 22, 29, 31 and 32.

III. ARGUMENT

A. **Claims 10, 12-14, 17, 19-21, 23-28,
30, 33 and 34: Murata '762 In View of
Hill '600 and further in view of Chikama '041**

1. **Claims 10, 12-14, 17, 19-21, 23-28, 30,
33 and 34: The Combination of Murata '762,
Hill '600 and Chikama '041 Fails To Teach Or
Suggest A Unitary Control and Display Handset Element.**

It is well-settled that during examination "claims . . . are to be given their broadest **reasonable** interpretation **consistent with the specification . . .**" *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (citing *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990))⁴; accord, e.g., *In re Buszard*, 504 F.3d 1364, 1366 (Fed. Cir. 2007). The potential breadth of any "reasonable" claim interpretation is not unlimited. Rather, in addition to the requirement that a "reasonable" claim interpretation be "**consistent with the specification**," it also "must be consistent with the [interpretation] that **those skilled in the art** would reach." *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999); accord, e.g., *In re Bond*, 910 F.2d at 833 ("It is axiomatic that, in proceedings before the PTO, . . . claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.").

Given these requirements, the Federal Circuit and the Board have routinely rejected constructions that were either inconsistent with the specification or not in harmony with the perspective of a person of ordinary skill in the art. See, e.g., *In re Buszard*, 504 F.3d at 1367 (rejecting Board's construction equating "'flexible' with 'rigid'" as "contrary to science" and lacking evidence); *In re Cortright*, 165 F.3d at 1358 (rejecting Board's construction as inconsistent with understanding of person of ordinary

⁴ Unless otherwise noted, all emphasis is added.

skill in art based on patent's disclosure); *Ex Parte Nycamp*, Appeal No. 2008-0510, pp. 6-9, 2008 WL 838788, at *3-*4, (BPAI Mar. 28, 2008) (rejecting Examiner's broad construction of "metal office furniture" as inconsistent with specification) (non-precedential); *Ex Parte Adams*, Appeal No. 2008-0286, p. 6, 2008 WL 650821, at *3, (BPAI Mar. 11, 2008) (rejecting Examiner's broad construction as inconsistent with the specification) (non-precedential); *Ex Parte Davis*, Appeal No. 2007-2318, pp. 8-9, 2007 WL 2030494, at *5, (BPAI July 11, 2007) ("The Examiner provided no evidence to show that those skilled in the art recognize a broader definition of "retrieval.") (non-precedential); *Ex Parte Omar*, Appeal No. 2007-0816, pp. 3-4, 2007 WL 2020934, at *2 (BPAI Apr. 6, 2007) ("We agree with Appellant that, by interpreting 'seat belt' to encompass the hand and wrist restraints in Woody's device, the Examiner has given the term 'seat belt' an unreasonably broad interpretation.") (non-precedential).

The Examiner's argument largely concerns the construction of the phrase "unitary control and display handset element". Appellants and the Examiner are in agreement that, per the limitations found in Claim 10, a unitary control and display handset element must comprise at least two elements, namely a "control" element and a "screen" element. In addition, Appellants and the Examiner are in agreement that the term "unitary" can mean either "a single thing" or "any group of things . . . regarded as an entity," (Examiner's Answer at p. 13, ¶ [23c]) meaning that regardless of the number of comprising elements, together those elements are said to be a part of a single item.

Appellants and the Examiner disagree, however, as to the meaning of the term "handset" within the phrase "unitary control and display handset element". The Examiner contends that the term handset "provides no distinct structural limitation," and

that "the only weight which can be given to 'handset' is that the element must be capable of manipulation by hand." (Examiner's Answer at p. 14, ¶ [24c]) Appellants contend that the term handset most definitely has specific meaning, and that it provides a distinct structural limitation. A definition of "handset" is therefore necessary. Fortunately, the specification, which refers to and describes the term "handset" **over one hundred times**, provides clear direction as to its meaning in support of Appellants' contention.

For example, according to the specification,

[t]he **handset** combines the display and control features that are necessary and useful for a user of the remote video inspection system 100 to monitor and control the operation of the remote video inspection system 100 and to observe, evaluate and record the results of an inspection. The **handset** also provides electrical, optical, mechanical and fluid communication as necessary between the various cables and replaceable probes . . .

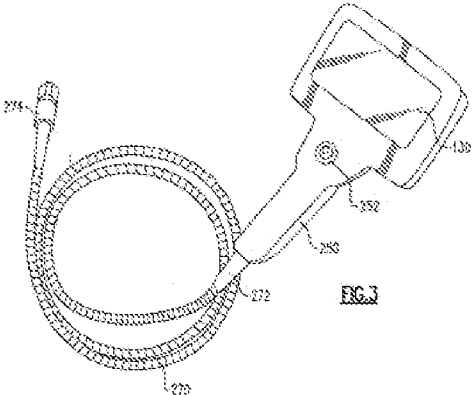
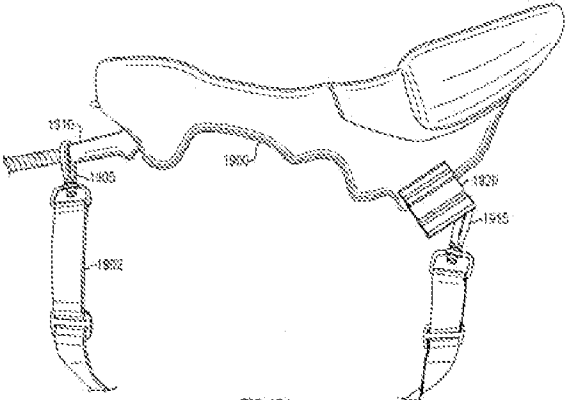
(Specification at p. 15, ¶ [0065])

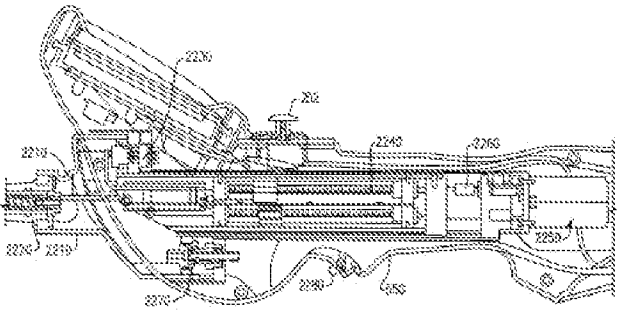
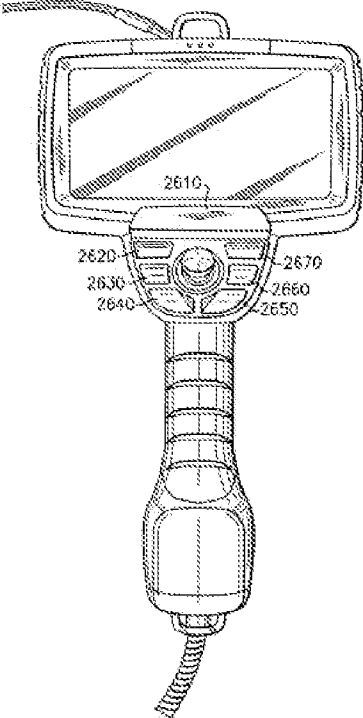
In another example the specification states that,

[t]he handset is ergonomically designed such that the grip section is hand-sized and includes a non-slip grip area. Interchangeable insertion tubes for the flexible endoscopic or borescopic probe are provided that can be selectively and interchangeably be [sic] connected to the handset. According to one embodiment, manual control 250 comprises articulation motors that are retained in a proximal end of the manual control 250, the articulation motors located so as to provide balance to the handset. The manually operated control module is ergonomically designed for ease and convenience of use by either the right hand or the left hand of a user. In addition, the handset also includes flat areas on a bottom portion to permit the handset to rest on a surface, for example, a table top, **the handset further having additional hand clearance at the bottom to aid the user/operator in picking the handset up**. The handset in one embodiment includes at least one set of integrated rings for storage hooks or for carrying straps and includes an integrated mounting feature.

(Specification at p. 18, ¶ [0069])

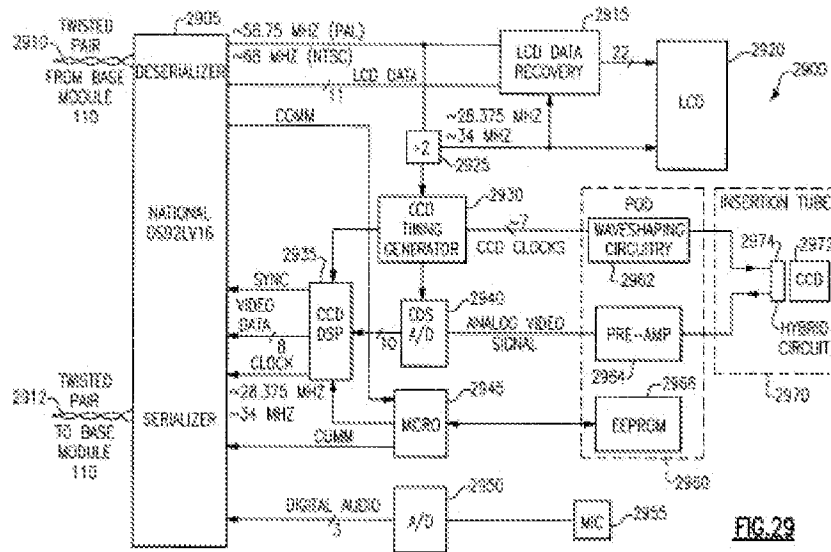
The figures are also clear about what is meant by the term "handset", several examples of which are shown below:

Brief Description of the Drawing	Corresponding Figure
<p>"FIG. 3 illustrates <i>an exemplary handset</i> and cable useful for practicing the invention" (Specification at p. 3, ¶ [0016])</p>	 <p>FIG. 3</p>
<p>"FIG. 19A is a drawing showing an alternative strap embodiment in which there are no hooks on <i>the handset</i>, according to principles of the invention" (Specification at p. 5, ¶ [0033])</p>	 <p>FIG. 19A</p>

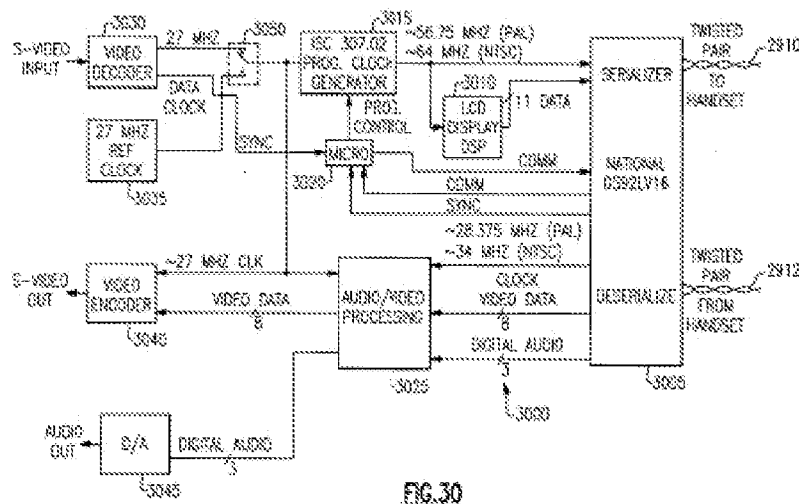
Brief Description of the Drawing	Corresponding Figure
<p>"FIG. 22 illustrates features of the second embodiment, showing a <i>cross-sectional drawing of the handset</i>, according to principles of the invention" (Specification at p. 5, ¶ [0036])</p>	 <p style="text-align: center;">FIG. 22</p>
<p>"FIG. 26 is a perspective drawing that <i>illustrates features of a handset</i> according to principles of the invention" (Specification at p. 5, ¶ [0040])</p>	 <p style="text-align: center;">FIG. 26</p>

Furthermore, the specification describes how the incorporation of endoscopic control and display elements into a unitary, handheld housing that an inspector can easily support and operate with one hand while conducting an inspection required significant technical and design considerations. For example, Figure 29, shown below,

provides "a high level block diagram of a circuit used for interfacing an insertion tube with a handset." (Specification at p. 5, ¶ [0043])



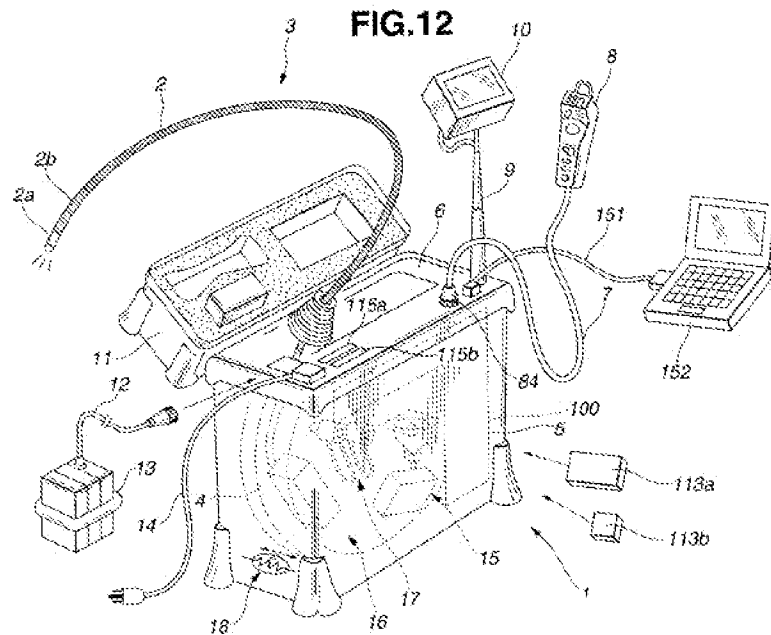
Similarly, Figure 30 provides "a high level block diagram of a circuit used for interfacing a base module with a handset." (Specification at p. 5, ¶ [0044])



From these circuit diagrams and their corresponding descriptions in the specification (see Specification at pp. 36-39, ¶¶ [0117]-[0121]), it is clear that the term "handset"

refers to a distinct element comprising both a screen element and a control element that interfaces with both a base module and an insertion tube. Nowhere in the specification are the terms endoscope or borescope system, base module or remote video inspection system used interchangeably with the term handset.

Based on the intrinsic evidence provided in the specification, it is clear that any proper construction of the term "handset" in Claim 10 must require that the handset be a distinct element that together with numerous other elements comprises an endoscope system, but which is not in itself an endoscope system. More specifically, the claimed handset must comprise a screen element and a control element, both of which are contained within a unitary housing that can be manipulated in the hand. In turn, the claimed handset interfaces with both a base module and an insertion tube. Such an interpretation is consistent with what one of ordinary skill in the art of endoscopic systems would understand a "handset" to mean. Therefore, while a unitary handset having both a control element and a screen element can certainly be said to be part of an overall endoscope system, it does not follow that the endoscope system itself can be considered a unitary handset simply because it has individual control and screen elements. For example, one of ordinary skill in the art would not understand an entire endoscope system, such as element 1 of Murata '762, shown below in FIG. 12 of Murata '762, as being a "unitary control and display handset," as argued by the Examiner.



Rather than confront the absurdity that the endoscope system 1 of Murata '762 is a "handset", the Examiner states that "the word 'handset' provides no distinct structural limitation," and that "the only weight which can be given to 'handset' is that the element must be capable of manipulation by hand." (Examiner's Answer at p. 14, ¶ [24c]) In support of this argument, the Examiner completely ignores the specification, which, as shown above, provides a wealth of information contradictory to the Examiner's interpretation. In ignoring this intrinsic evidence the Examiner improperly inflates the scope of the term "handset" in the rejected claims well beyond what would be consistent with the specification or what would be understood by one of ordinary skill in the art.

In coming to this conclusion, the Examiner states, "[i]t is maintained that [elements]'10' and '8' [of Murata '762] are in fact part of a unitary 'endoscope system 1', as disclosed by Murata. . . . [T]he 'endoscope system 1' of Murata may be regarded as

an entity which includes, among other things, 'display device 10' and 'remote control unit 8'." (Examiner's Answer at p. 13, ¶ [23d]) According to the Examiner's reasoning, because the display device 10 and remote control unit 8 are part of the overall endoscope system 1 of Murata '762, and because "the 'display device 10' and 'remote control 8' disclosed by Murata may be broadly and reasonably interpreted as being *part of* (i.e., they compose) something which may be *regarded as an entity* (i.e. something which is unitary), then the controverted claim limitation is met." (Examiner's Answer at p. 13, ¶ [23c]) (emphasis in original) This reading of Claim 10 completely ignores not only the plain language of the claim itself, which requires a unitary control and display **handset** element, but also the description of the invention, specifically the handset, provided and emphasized in the specification as evidenced above.

As a result, the Examiner's argument, which is based on an overly broad and unsupported construction of the term "handset" as meaning "capable of manipulation by hand," (Examiner's Answer at p. 14, ¶ [24c]) necessarily provides that Claim 10 cover anything having both a control element and a screen element so long as each of these elements is capable of being manipulated by hand. Such an overly broad interpretation is not permissible, and the term "unitary control and display handset element" must be construed consistent with the clear meaning given to the term in the specification, as well as what one of ordinary skill in the art would understand the term to mean. In applying the correct definition of a unitary control and display handset element, it is clear that Murata '762 does not disclose such an element. Nor does Murata '762 disclose how to combine the electronic and electro-mechanical components of an endoscopic control and an endoscopic display into a unitary control and display handset

element that ergonomically fits within the hand of an inspector, and that can be used by the inspector to both control the operation of the endoscope and view the inspection results. Hill '600 and Chikama '041 fail to provide this disclosure as well. Therefore, the references cited by the Examiner fail to address the complex technical and design considerations disclosed and claimed by the present invention that are necessary in designing a unitary control and display handset element.

For all of these reasons, Appellants respectfully request that the Examiner's rejection of Claim 10 be withdrawn. Furthermore, since "[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious," *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988), Appellants request that the Examiner's rejection to dependent Claims 12-14, 17, 19-21, 23-26, 28, 30, 33 and 34, all of which depend from independent Claim 10, also be withdrawn. Appellants therefore request withdrawal of the rejections of claims 10, 12-14, 17, 19-21, 23-26, 28, 30, 33 and 34, and allowance of the application.

**2. Claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34:
The Combination of Murata '762, Hill '600 and
Chikama '041 Fails To Teach Or Suggest That a
Plurality of Insertion Elements Can Be Connected
to Said Unitary Control and Display Handset Element.**

The Examiner has also failed to show how the combination of Murata '762, Hill '600 and Chakima '041 discloses a plurality of insertion elements, "wherein each one of said plurality of insertion elements can be used without modification of said unitary control and display handset element." (Claim 10) As discussed above, the Examiner has improperly construed the phrase "unitary control and display handset element," relying on the entire endoscope system 1 of Murata '762 as disclosing this limitation.

As Appellants stated in their Appeal Brief, the single endoscope 3 of Murata '762 directly interfaces with the light source unit 15, camera control unit (CCU) 16, and motor-driven angling unit 17 (Murata '762 at ¶ [0046] and Figs. 2, 5, 7, 8, 10, 11, 13), all of which are located within the box-like main unit 5 (Murata '762 at Figs. 1, 6, 9, 12). As is clearly shown in each of the embodiments disclosed in Murata '762, there is but a **single** endoscope 3 that is connected to the **box-like main unit 5**. Nowhere does Murata '762 disclose that the endoscope is connected to the control element 8 and/or the display element 10. Unlike the Murata '762 disclosure, Appellants' pending claims are distinguishable in that they are directed to a modular visual inspection system having a **plurality of insertion elements connected to the unitary control and display handset element** (and not the box-like main unit), which provides the user with greater flexibility in customizing the system and selecting an appropriate insertion element when conducting an inspection. (e.g., Specification at [0078]) As shown and discussed above, Figures 29 and 30 in the present application demonstrate this novel aspect to the invention and the complexity of combining endoscopic control and display functions in a unitary control and display handset element.

Examiner's reliance on Hill '600 as disclosing "a plurality of insertion elements for use in a single device" (Examiner's Answer at p. 15, ¶ [25c]) based on the disclosure in Hill '600 of "a variety of endotracheal tubes having various lengths" (Hill '600 at col. 10, line 24) does not remedy the failure of the Examiner to identify a single reference or combination of references disclosing a modular visual inspection system having **a plurality of insertion elements connected to the unitary control and display handset element**.

For all of these reasons, Appellants respectfully request that the Examiner's rejection of Claim 10 be withdrawn. Furthermore, since "[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious," *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988), Appellants request that the Examiner's rejection to dependent Claims 12-14, 17, 19-21, 23-28, 30, 33 and 34, all of which depend from independent Claim 10, also be withdrawn. Appellants therefore request withdrawal of the rejections of claims 10, 12-14, 17, 19-21, 23-28, 30, 33 and 34, and allowance of the application.

B. Claim 11: Murata '762 in view of Hill '600 and Chikama '041 and further in view of Pearlman '992

For the same reasons given in Section A traversing the rejection of independent Claim 10, Appellants request withdrawal of the rejection of Claim 11, which depends from Claim 10, and allowance of the application since "[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious," *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988).

C. Claims 18, 22, 29, 31 and 32: Murata '762 in view of Hill '600 and Chikama '041 and further in view of Saito '922

For the same reasons given in Section A traversing the rejection of independent Claim 10, Appellants request withdrawal of the rejections of Claims 18, 22, 29, 31 and 32, all of which depend from Claim 10, and allowance of the application since "[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious," *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988).

IV. CONCLUSION

Therefore, because Murata '762 fails to disclose both (i) a unitary control and display handset element, and (ii) a plurality of insertion elements that can be connected to said unitary control and display handset element, the Examiner has omitted several essential elements needed for a *prima facie* obviousness rejection of Claim 10, the sole remaining independent claim, under 35 U.S.C. § 103(a). Claims 11-14 and 17-34 all depend on Claim 10. Therefore the Examiner has also omitted several essential elements needed for a *prima facie* obviousness rejection of Claims 11-14 and 17-34. Because of the Examiner's omission of essential elements needed for a *prima facie* obviousness rejection under 35 U.S.C. § 103(a), Appellants respectfully request withdrawal of the Examiner's claim rejections and allowance of the application.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0289, under Order No. 702_102 from which the undersigned is authorized to draw.

Dated: October 29, 2008

Respectfully submitted,

Electronic signature: /Denis J. Sullivan/
Denis J. Sullivan
Registration No.: 47,980
MARJAMA MULDOON
BLASIAK & SULLIVAN LLP
250 South Clinton Street
Suite 300
Syracuse, New York 13202
(315) 425-9000
Customer No.: 20874